

FIG 3A

1. Deposit and pattern nitride.

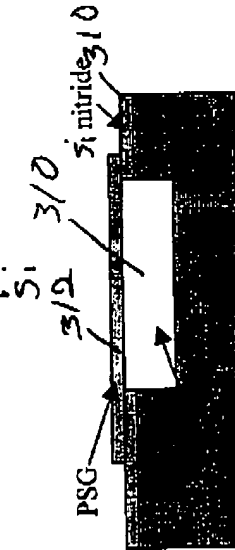


FIG 3B

2. Local oxidation. Deposit and pattern phosphosilicate glass (PSG).

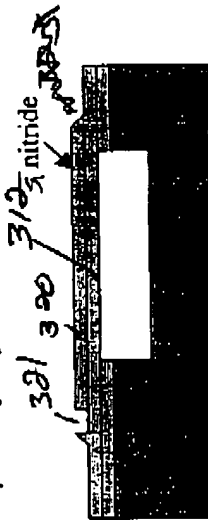


FIG 3C

3. Deposit nitride and open etching holes.

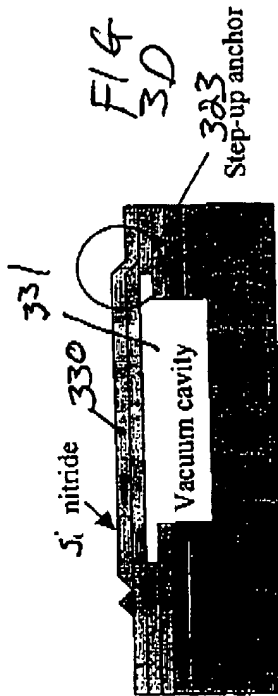


FIG 3D

4. Remove oxide and PSG by 48% HF.

Deposit nitride

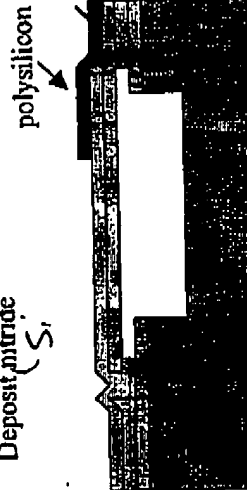


FIG 3E

5. Deposit, dope and pattern polysilicon.

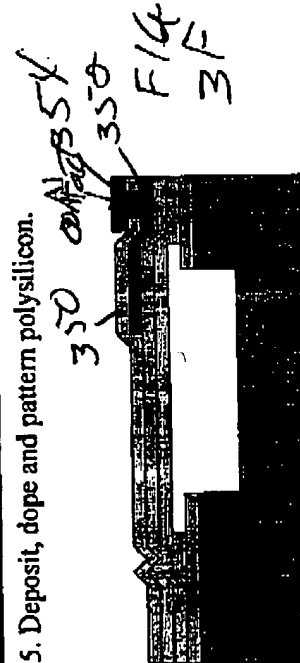


FIG 3F

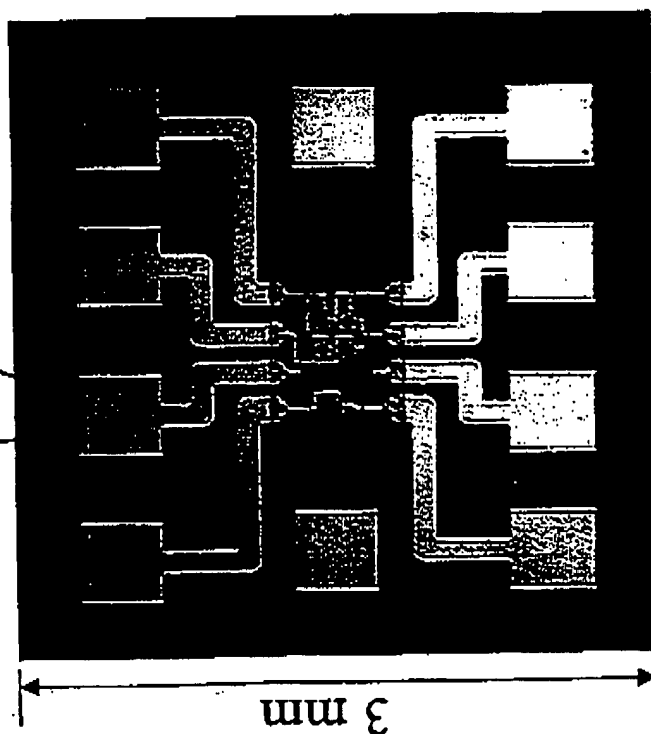
6. Deposit nitride as passivation layer and Al metallization.

FIG 5



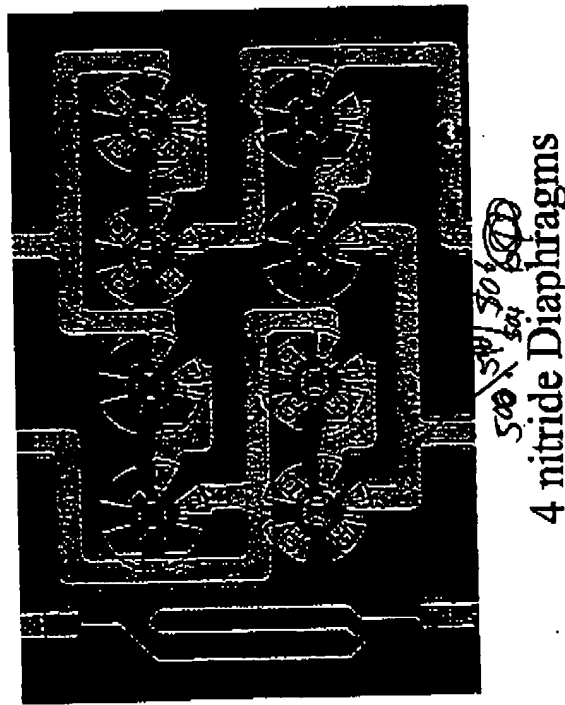
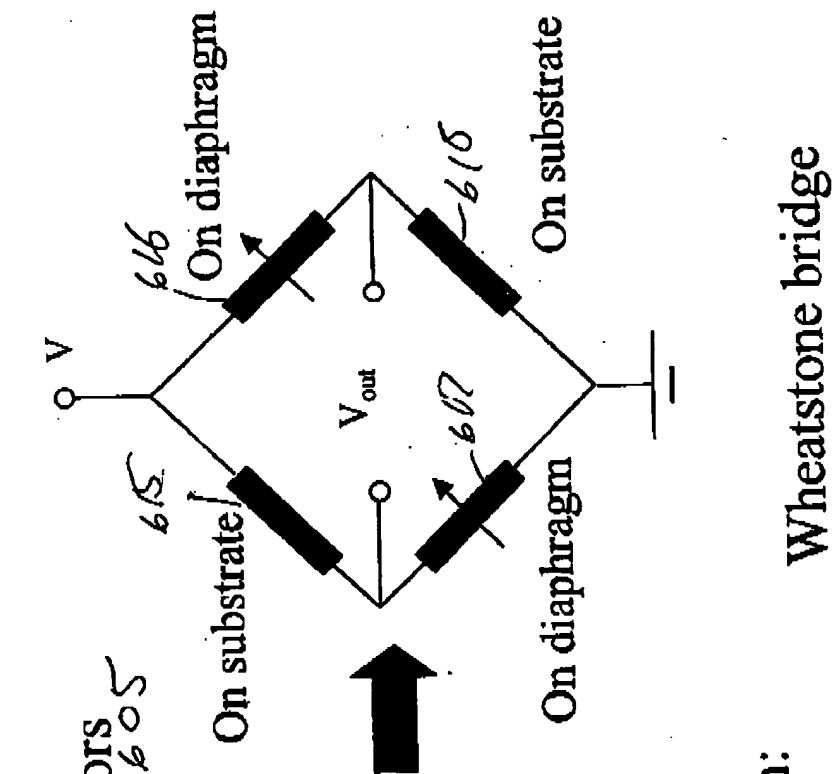
Chip wire-bonded to metal header

FIG 4
40x Al pads



3 mm

Diced sensor chip



Multi-diaphragm configuration:

- minimize self-heating effect
- make layout much easier

FIG 6

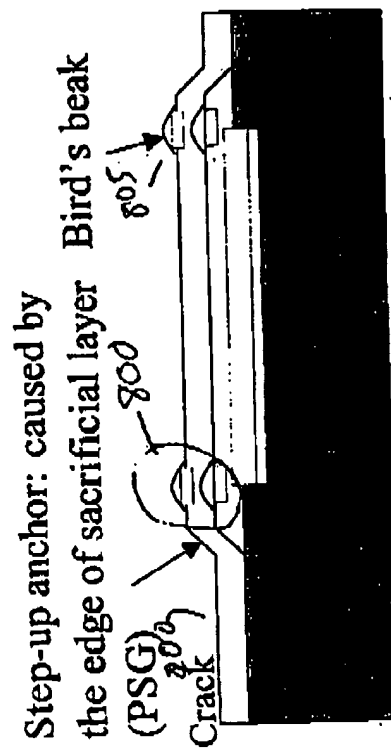


FIG 8
Cross section of sensor diaphragm

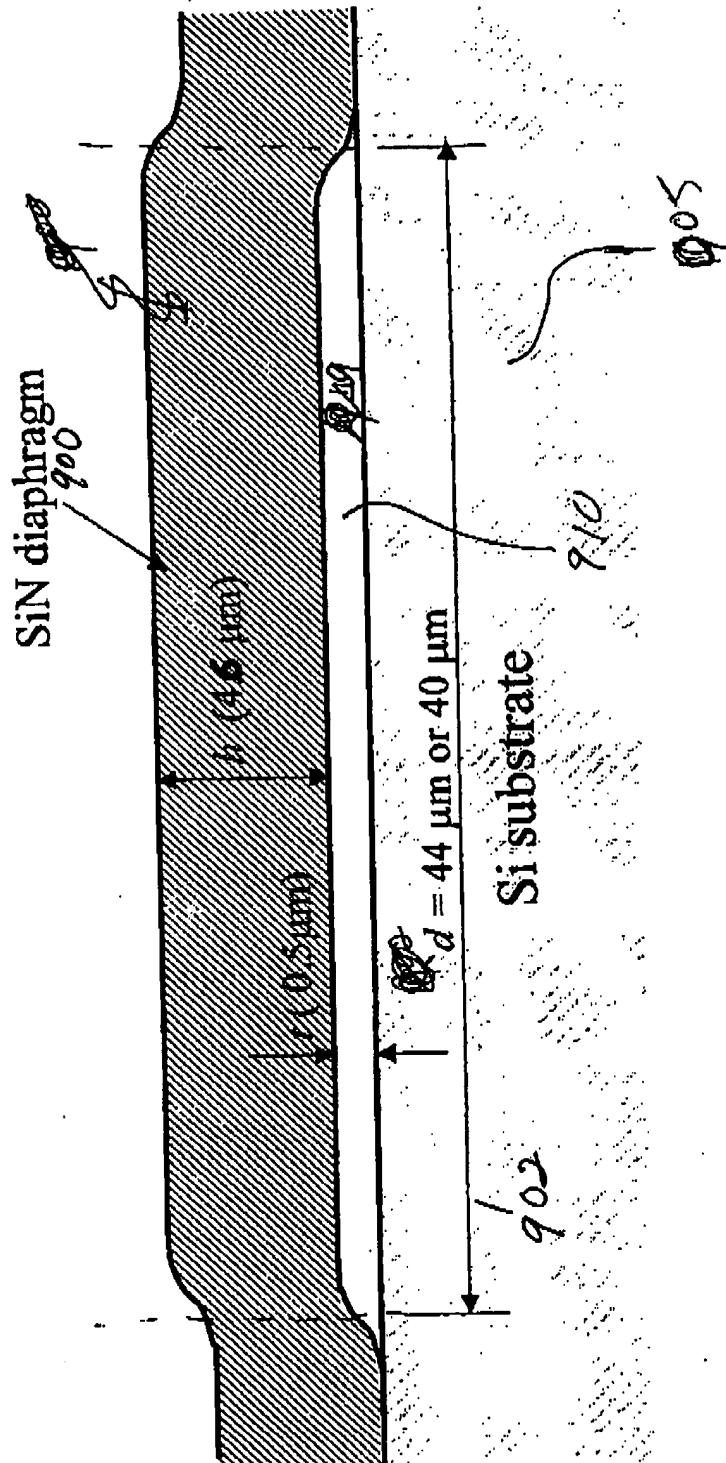


FIG 9

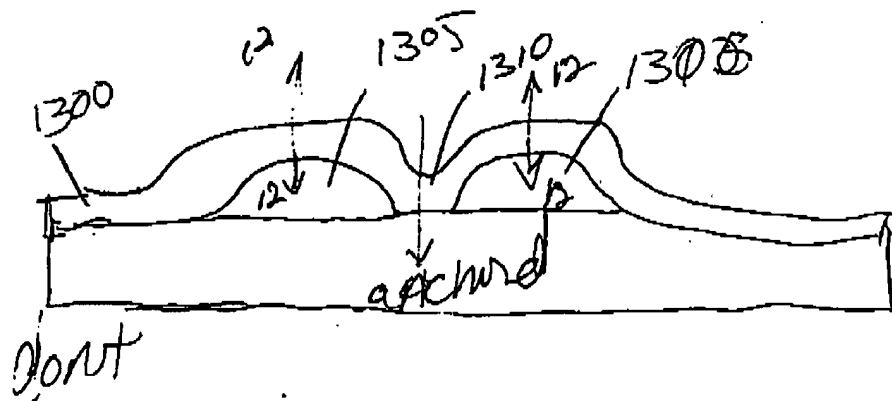
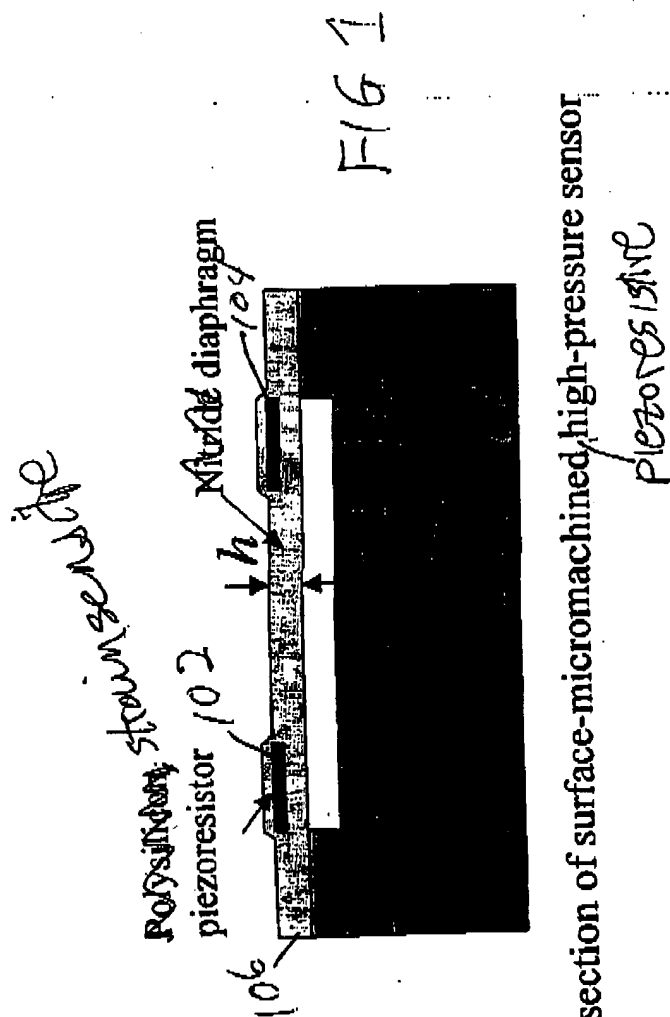


FIG 13



Cross section of surface-micromachined, high-pressure sensor